



TYCO 18031 (AT 43)
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Bricker et al.

Serial No.: 10/659,156

Filed: September 10, 2003

For: CABLE JACKET WITH
INTERNAL SPLINES

:
: Art Unit: 2831
:
: Examiner: Nguyen, Chau N.
:
:
:

DECLARATION OF PRIOR INVENTION

(37 C.F.R. § 1.131)

Hon. Assistant Commissioner for Patents
Washington, D.C. 20231

Richard Walter Speer, whose address is 5154 Nicole Road, Kernersville, North Carolina
27284 declares as follows:

1. This declaration is to establish conception of the invention claimed in the above-referenced application at a date prior to March 14, 2003.

2. I have reviewed and understand the patent application referenced in the caption above (hereafter "Subject Application"), including the specification, abstract, drawings and claims therefor.

3. I have reviewed United States Patent Application Publication No. 2004/0055779 titled "Communication Wire" filed on March 14, 2003 and published March 25, 2004, which, on information and belief, is being relied on in at least one rejection of the claims of the Subject Application (hereafter "Antedated Reference").

4. I am a co-inventor with Michael Wayne Bricker of the invention(s) recited in the claims of the Subject Application (hereafter "Claimed Invention").

BEST AVAILABLE COPY

TYCO 18031 (AT 43)
PATENT

5. The Claimed Invention of the Subject Application was conceived by my co-inventor and I before March 14, 2003 which is the filing date of the Antedated Reference.

6. The Claimed Invention was conceived in the United States.

7. As evidence that the Claimed Invention of the Subject Application was conceived before the filing date of the Antedated Reference, attached is a true and accurate copy of a preliminary invention disclosure (PID number 2002246) (hereafter "PID 2002246") that was prepared in connection with the Subject Application (see Attachment A).

8. PID 2002246 is dated December 13, 2002 and is entitled "Involute Spline Jacket" and includes one page of text and two pages of drawings attached thereto describing and illustrating the invention that was conceived.

9. The drawings attached to PID 2002246 are hand drawn sketches recorded in notebooks carried by my coinventor and I.

10. One of the sketches attached to PID 2002246 is dated May 5, 2002 and illustrates a cross sectional view of a cable having a center round filler, insulated cable conductors surrounding the filler, and a cable jacket having internally extending splines to prevent the cable core from twisting relative to the cable jacket to maintain electrical headroom of the cable.

11. The sketch dated May 5, 2002 includes my signature on the upper right hand corner of the page, and my signature was placed thereupon on the same date.

12. The other of the sketches is dated June 10, 2002 and includes two views of a cable according to the present invention, namely an end view and a side view with part of the cable jacket peeled away from the cable core.

13. The sketches dated June 10, 2002 show triangular shaped splines extending inwardly from a cable jacket in the end view, and in the side view one of the splines is shown in the

horizontal center of the cable, and other of the splines are shown in phantom at the upper and lower portions of the cable.

14. The sketches dated June 10, 2002 includes the signature of my coinventor on the lower right hand corner.

15. As indicated in the PID 2002246, at least one working model or prototype of the invention was constructed on or about July 8, 2002.

16. The working model or prototype of the invention was completed in the United States.

17. The working model or prototype of the invention included the features shown in the sketches dated May 5, 2002 and June 10, 2002.

18. The working model of the invention worked for its intended purpose to prevent twisting of the cable core relative to the cable jacket and to preserve electrical headroom of the cable.

19. The PID 2002246 is witnessed by four different persons having knowledge of the working model or prototype of the invention.

20. As further evidence that the Claimed Invention of the Subject Application was conceived and reduced to practice before the filing date of the Antedated Reference, attached hereto as exhibit B are true and accurate copies of production drawings including two drawing sheets of cable according to the Claimed Invention.

21. The production drawings are dated February 20, 2003 in the drawing legend at the bottom of the drawing sheets.

22. The production drawings are included in the Subject Application to describe and illustrate the Claimed Invention.

TYCO 18031 (AT 43)
PATENT

23. Cable having the features shown in the production drawings was actually constructed in the United States at a date prior to March 14, 2003.

24. The cable constructed from the production drawings worked for its intended purpose to prevent twisting of the cable core relative to the cable jacket and to preserve electrical headroom of the cable.

25. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on Information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


Richard Walter Spencer

03 JAN 06
(Date)

P010002

TWC 3 (12/95)

PRELIMINARY INVENTION DISCLOSURE

COMPLETE AND RETURN TO:

The Whitaker Corporation (M/S 324-01)
4550 New Linden Hill Road, Suite 450
Wilmington, DE 19808

DESCRIPTIVE TITLE OF INVENTION **Involute SPLINE Jacket** DATE **12-13-02**

WHAT IS THE PROBLEM WITH THE STATE OF THE ART, OR PRIOR ART TECHNOLOGY? WHAT IS THE PURPOSE OF THE INVENTION?
See Attachment #1

WHAT ARE THE NEW FEATURES OF THE INVENTION WHICH OVERCOME THIS PROBLEM?
See Attachment #2

ON SEPARATE DRAWINGS OR SKETCHES, DESCRIBE THE FEATURES OF THE INVENTION AND HOW THEY WORK. ARE THESE ENCLOSED? ☒ YES ☐ NO

IDENTIFY THE CLOSEST PRIOR ART TECHNOLOGY, IF ANY, OF WHICH YOU ARE AWARE. PROVIDE COPIES IF AVAILABLE. **N/A**

ENTER THE DATE OF THE FIRST WRITTEN DESCRIPTION OR THE FIRST DATED SKETCH OF INVENTION AND ATTACH COPIES. **5-1-02**

ENTER THE DATE A WORKING MODEL, DEVICE OR PROCESS WAS OR WILL BE COMPLETED. **7-8-02**

GIVE A BRIEF DESCRIPTION OF CIRCUMSTANCES OF INITIAL DISCLOSURE OUTSIDE AMP COMPANIES
None

ARE LATEST DRAWINGS ENCLOSED? ☒ YES ☐ NO ARE THEY CAD? ☐ YES ☒ NO

IF CAD, WHO SHOULD BE CONTACTED TO RETRIEVE CAD FILES?

INVENTOR'S FULL NAME (incl. full middle name) Michael Wayne Bricker	INVENTOR'S FULL NAME (incl. full middle name) RICHARD WALTER SPEER	INVENTOR'S FULL NAME (incl. full middle name)
BUSINESS PHONE 336-665-6604	BUSINESS PHONE 336-665-6664	BUSINESS PHONE
FAX 336-665-6624	FAX 336-665-6624	FAX
AMP EMPLOYEE NO. 14165	AMP EMPLOYEE NO. 15779	AMP EMPLOYEE NO.
DIVISION PCD	DIVISION PCD	DIVISION
MAILSTOP 264-01	MAILSTOP 264-01	MAILSTOP
CITIZENSHIP USA	CITIZENSHIP USA	CITIZENSHIP
HOME ADDRESS 1745 Oak Ridge Rd. Oak Ridge NC 27310	HOME ADDRESS 5154 NICOLE RD KERNERSVILLE, NC 27284	HOME ADDRESS
SIGNATURE Michael Bricker	SIGNATURE RW/S	SIGNATURE
DATE 12-13-02	DATE 12-13-02	DATE
WITNESS Alvin F. Boy	WITNESS Jimmy L. Gray 12/13/02	WITNESS
WITNESS Thomas M. Jones	WITNESS Debra L. Davis 12-13-02	WITNESS
DIVISION MGR NAME & PHONE AD Link 336-665-6631	DIVISION MGR NAME & PHONE AL Link 336-665-6631	DIVISION MGR NAME & PHONE

--- FOR THE WHITAKER CORPORATION USE ONLY ---

DEC 20 2002
THE WHITAKER CORPORATION

PID NO.
2002246
ATTORNEY
Joseph A. Tessa
PHONE: (302) 633-3566

Attachment #1

Jacket designs that are used today are smooth on the inside where they are in contact with conductors. This does not hold the conductors in a securer position inside the diameter of the jacket. The new design has ribs inside the jacket that are parallel with the conductors and hold them in a securer position inside the jacket diameter.

Attachment #2

The features that have over come the moving of the conductors inside the jacket diameter are rids that are evenly spaced around the inside diameter of the jacket. These spline's run in parallel with the conductors that are inside the jacket diameter.



JOHN D. HUCKINS Presi.

(219) 259-7857 • (800) 747-9625

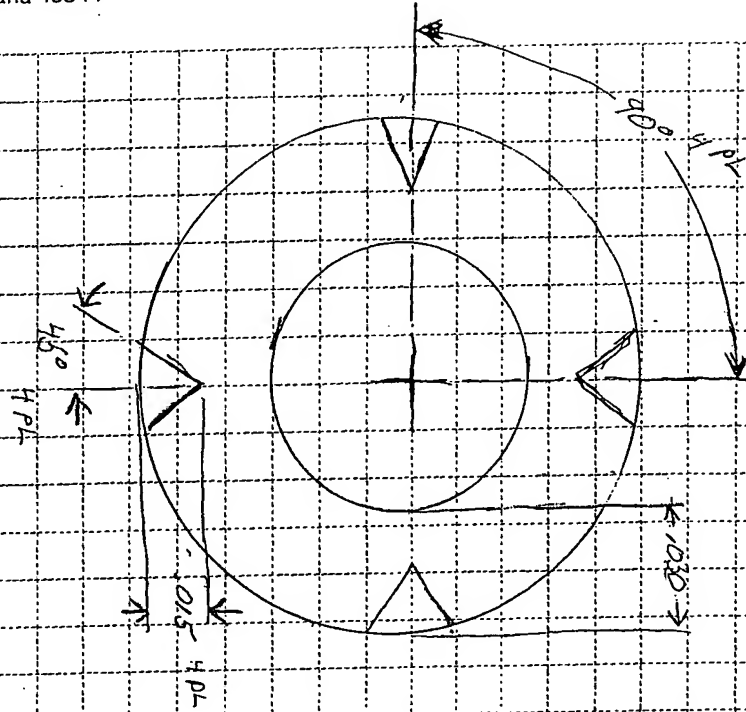
Fax (219) 259-3543

E-mail: precision@championtool.com

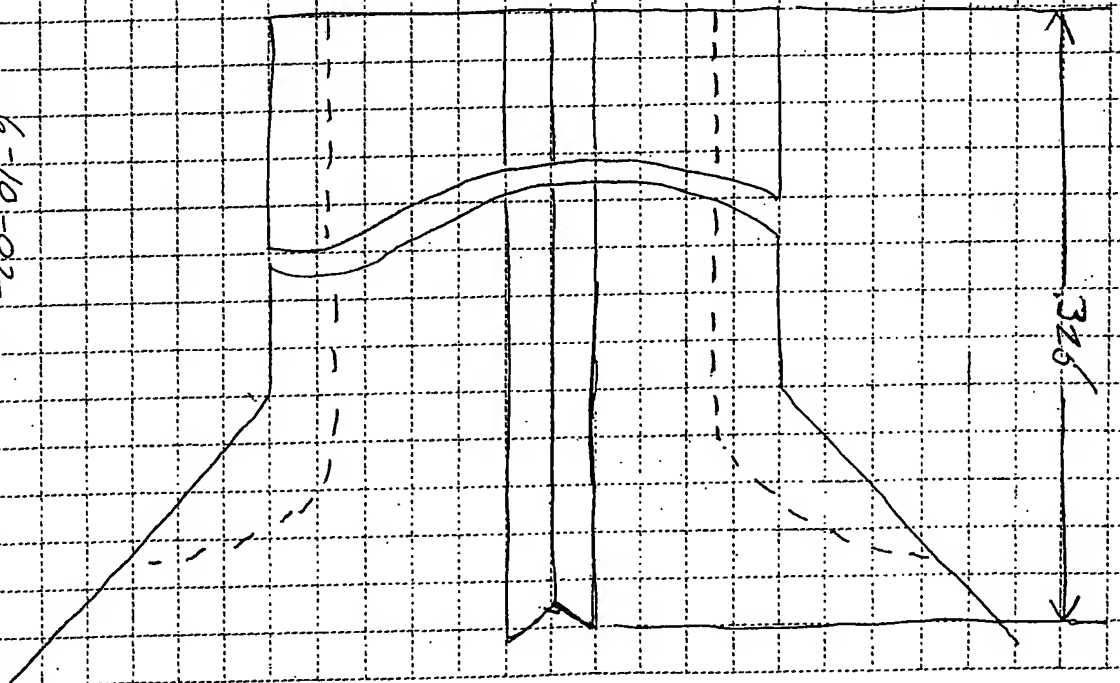
**Champion
tool &
engineering**
INC.

1005 West 8th Street, Mishawaka, Indiana 46544

TOOLS
DIES
JIGS &
FIXTURES



6-10-02
Jacket Tip
GAT-C Grip design.
M. H. Huckins



DATE

05MAY10Z

FILE

REFERENCE

SPLINE JACKET

RLW

INCHES

1

2

3

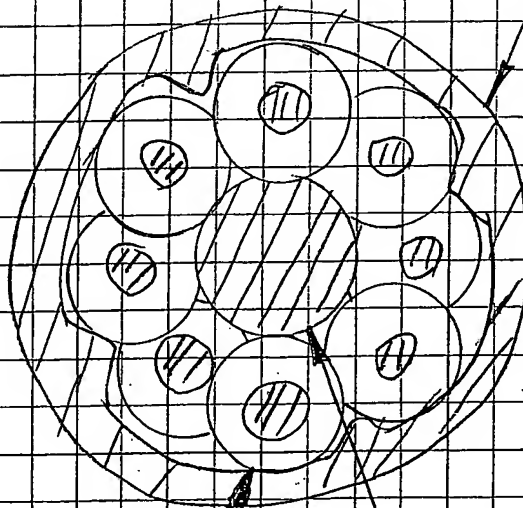
4

5

6

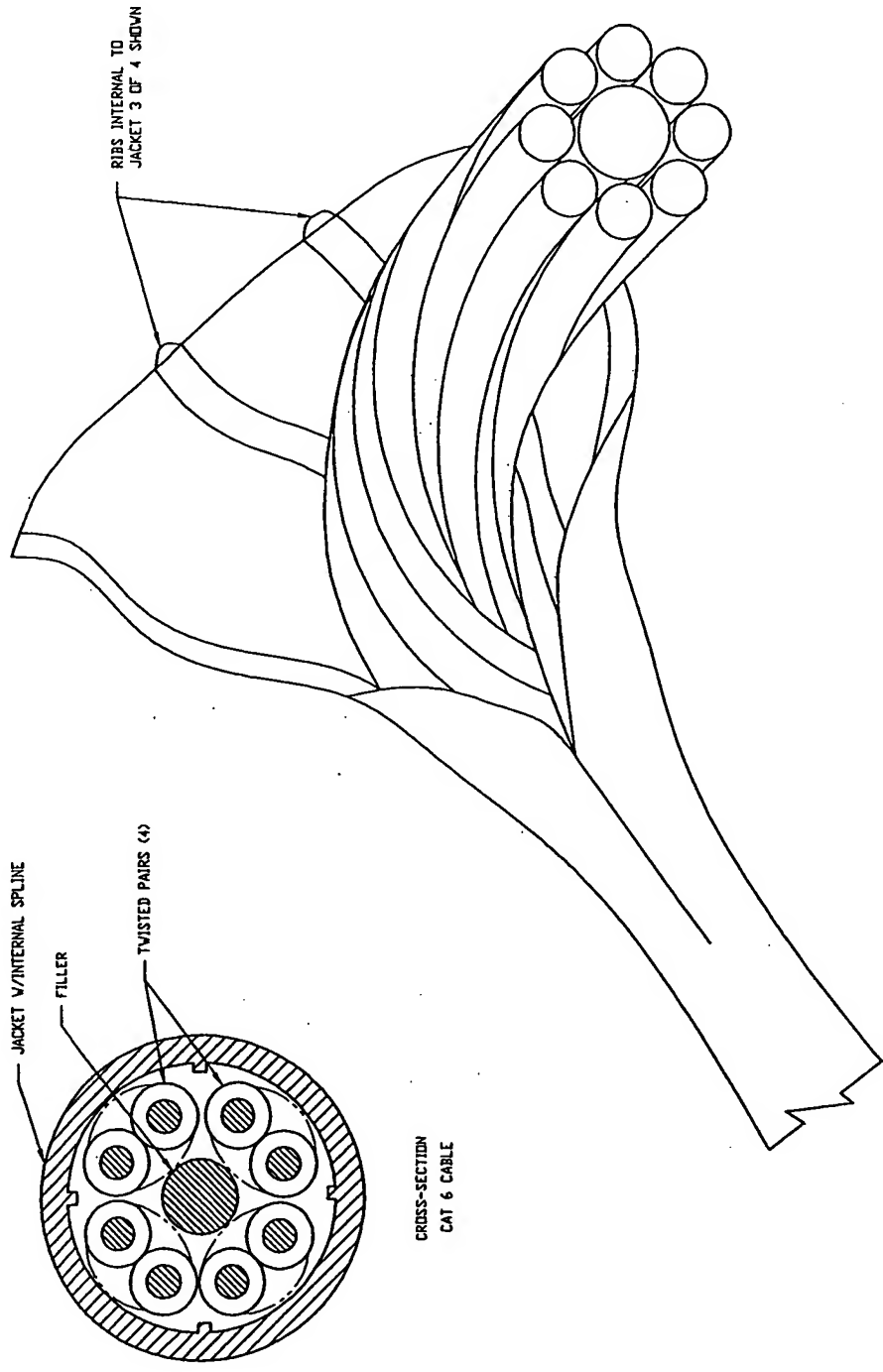
7

JACKET WITH EXTRUDED INTERNAL
RIBS - RIBS PREVENT CONDUCTOR
CORE FROM TWISTING DURING
HANDLING, MAINTAINING
ELECTRICAL HEADROOM.



CENTER ROUND
FILLER (EXISTING)

INSULATED
CONDUCTORS



100 20

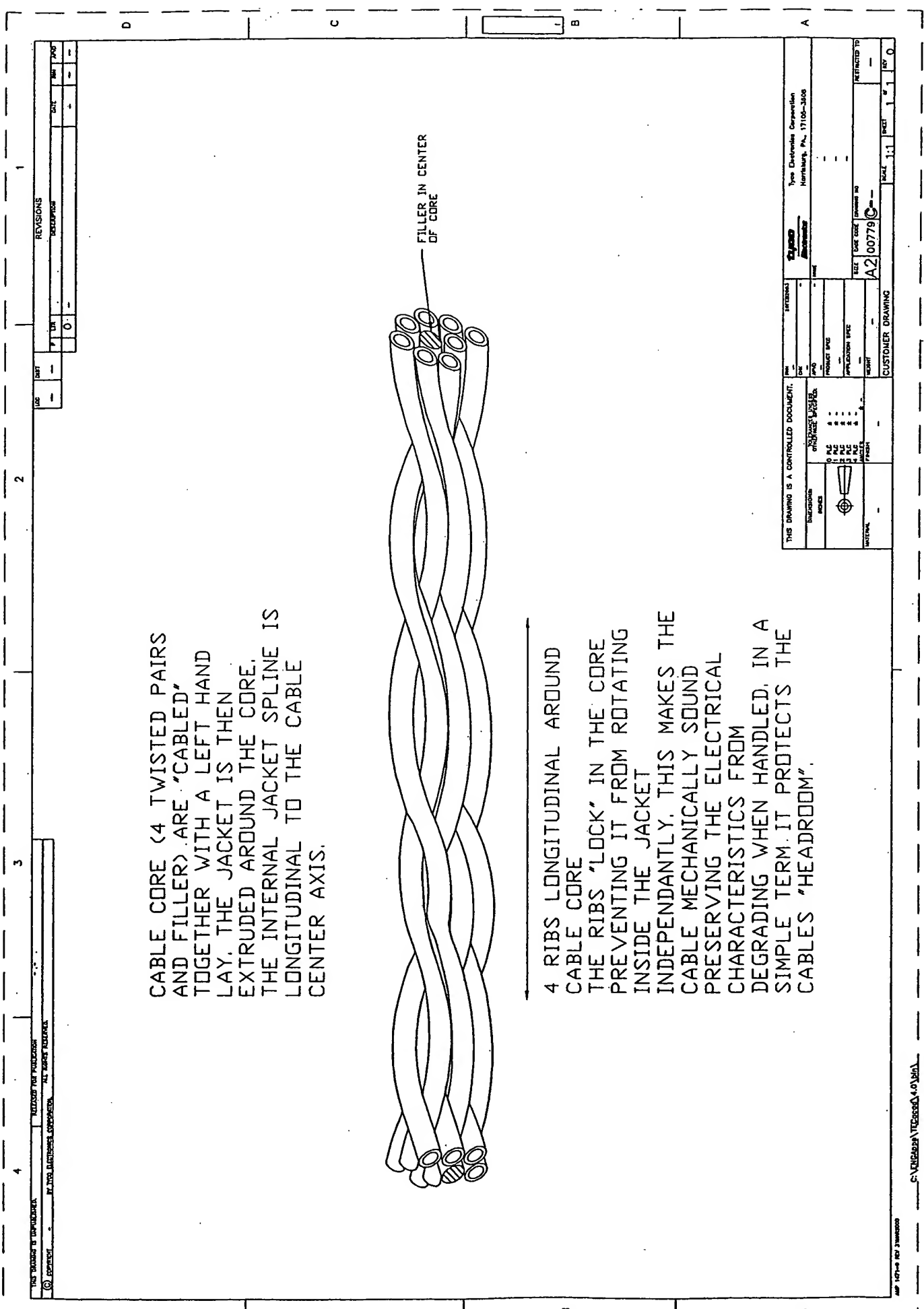
THIS DRAWING IS A CONTROLLED DOCUMENT.

THIS INFORMATION IS CONFIDENTIAL AND PROPRIETARY TO THE
 DEFENSE INFORMATION SYSTEMS CORPORATION (DISC) AND IS NOT TO BE
 DISCLOSED OR DISTRIBUTED OUTSIDE DISC WITHOUT AUTHORIZATION FROM DISC
 DISC INFORMATION SYSTEMS CORPORATION, FORT MONROE, VIRGINIA 22060

REV	DATE	DESCRIPTION	BY	CHKD	DATE	REVISION
1	10/1/00	INITIAL DESIGN				
2	10/1/00	REVISED TO ADD CABLE				
3	10/1/00	REVISED TO ADD CABLE				
4	10/1/00	REVISED TO ADD CABLE				
5	10/1/00	REVISED TO ADD CABLE				
6	10/1/00	REVISED TO ADD CABLE				
7	10/1/00	REVISED TO ADD CABLE				
8	10/1/00	REVISED TO ADD CABLE				

REV	DATE	DESCRIPTION	BY	CHKD	DATE	REVISION
1	10/1/00	INITIAL DESIGN				
2	10/1/00	REVISED TO ADD CABLE				
3	10/1/00	REVISED TO ADD CABLE				
4	10/1/00	REVISED TO ADD CABLE				
5	10/1/00	REVISED TO ADD CABLE				
6	10/1/00	REVISED TO ADD CABLE				
7	10/1/00	REVISED TO ADD CABLE				
8	10/1/00	REVISED TO ADD CABLE				

REV	DATE	DESCRIPTION	BY	CHKD	DATE	REVISION
1	10/1/00	INITIAL DESIGN				
2	10/1/00	REVISED TO ADD CABLE				
3	10/1/00	REVISED TO ADD CABLE				
4	10/1/00	REVISED TO ADD CABLE				
5	10/1/00	REVISED TO ADD CABLE				
6	10/1/00	REVISED TO ADD CABLE				
7	10/1/00	REVISED TO ADD CABLE				
8	10/1/00	REVISED TO ADD CABLE				



CABLE CORE (4 TWISTED PAIRS AND FILLER) ARE "CABLED" TOGETHER WITH A LEFT HAND LAY. THE JACKET IS THEN EXTRUDED AROUND THE CORE. THE INTERNAL JACKET SPLINE IS LONGITUDINAL TO THE CABLE CENTER AXIS.

4 RIBS LONGITUDINAL AROUND CABLE CORE
THE RIBS "LOCK" IN THE CORE PREVENTING IT FROM ROTATING INSIDE THE JACKET
INDEPENDANTLY. THIS MAKES THE CABLE MECHANICALLY SOUND PRESERVING THE ELECTRICAL CHARACTERISTICS FROM DEGRADING WHEN HANDLED. IN A SIMPLE TERM IT PROTECTS THE CABLES "HEADROOM".

THIS DRAWING IS THE PROPERTY OF THE DRAWING OFFICE					
ALL RIGHTS RESERVED					
NO PART OF THIS DRAWING IS TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE DRAWING OFFICE					
REVISIONS					
NO.	DATE	DESCRIPTION	BY	CHKD	APPD
1	0				

THIS DRAWING IS A CONTROLLED DOCUMENT					
REVISIONS	DATE	DESCRIPTION	BY	CHKD	APPD
1	0				
MATERIAL		QUANTITY	DATE	BY	CHKD
A200779		1	0		
CUSTOMER DRAWING		DATE	BY	CHKD	APPD
A200779		1	0		
Type Electronics Corporation		Harrisburg, Pa. 17105-3500			

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.